If you are using a printed copy of this procedure, and not the on-screen version, then you MUST make sure the dates at the bottom of the printed copy and the on-screen version match. The on-screen version of the Collider-Accelerator Department Procedure is the Official Version. Hard copies of all signed, official, C-A Operating Procedures are kept on file in the C-A ESHQ Training Office, Bldg. 911A

C-A OPERATIONS PROCEDURES MANUAL

14.33.2 Occupational Safety and Health Operational Training for C-AD and SMD Office Workers

Text Pages 2 through 8

Hand Processed Changes

HPC No.	Date	Page Nos.	Initials

Approved: ***Signature on File*** _____
Collider-Accelerator Department Chairman — Date

Approved: ***Signature on File*** _____
Superconducting Magnet Division Head — Date

E. Lessard

Occupational Health and Safety Training Package for Offices

This package has been designed to aid in the delivery of required job-specific training for the work activities identified in the Workplace Hazard and Risk Assessment for Offices, and for the specific hazards and controls identified in Facility Risk Assessments (FRAs) and Job Risk Assessments (JRAs).

Your position has been determined to have a potential to significantly impact the safety and health of yourself and others. Thus, C-A Department and SM Division Managements have prepared the questions and answers on the following pages for your specific work/processes.

This safety and health material is incorporated into your current job and procedure training. If you have specific questions about this information after you have read the material, contact the C-A Department ESH&Q Division Head, Ray Karol (karol@bnl.gov) or the SM Division ESH Coordinator, Jim Durnan (durnan@bnl.gov).

You may keep this material as a handout and use it as a reference aid.

This specific training course is linked to your job-training assessment (JTA). You must read and acknowledge this material as part of the qualification to perform work in the offices. Please fill out the Read and Acknowledgement form on the last page, print it and return it promptly.

Occupational Health and Safety Training Package for Offices

Office Hazards:

- Housekeeping Hazards
- Working Environment Hazards and Ergonomics
- Hazardous or Toxic Materials
- Flammable or Combustible Materials
- Electrical Energy
- Kinetic Energy
- Potential Energy
- Natural Hazards

C-AD Contacts for Further ESHQ Information:

Associate Chair for ESHQ, OSH Management Representative,
EMS Management Representative, E. Lessard
Head of ESHQ Division, General Building Manager, R. Karol
Environmental Coordinator, J. Scott
Environmental Compliance Representative, M. VanEssendelft
ESH Coordinator, Access Controls Physicist, Laser Coordinator,
Tier 1 Coordinator, A. Etkin
Radiological Control Division Representative, P. Bergh
Procedures Coordinator, L. DiFilippo
ISSM Point of Contact, Quality and Assessment Manager, D. Passarello
Self Evaluation Program, J. Maraviglia
Source Custodian, Work Control Manager, P. Cirnigliaro
Training Coordinator, Training Manager, J. Maraviglia
Training Records, A. Luhrs

SMD Contacts for Further ESHQ Information:

Environmental Compliance Representative, M. VanEssendelft
ESH Coordinator, ORPS Coordinator, Division Emergency Coordinator, J. Durnan
Facility Support Representative, L. Stiegler
Quality Representative, C. Porretto
Training Coordinator, C. Porretto
90-Day Area Supervisor, T. Dilgen

Course Objective: Because your work activities have been identified as having significant potential to impact yours and others safety and health, this course has been designed to provide you with the job-specific information that you must know to protect yourself and others from hazards encountered in the offices.

1) What hazards are associated with your activities?

- Within each office area indoor air quality is a key component to the health of occupants. Engineering and administrative controls (e.g. windows, air conditioning, heating systems) are designed to address the indoor air quality issues. Poor indoor air quality has been linked to a typical spectrum of symptoms that includes headaches, unusual fatigue, varying degrees of itching or burning eyes, skin irritation, nasal congestion, dry or irritated throats, and nausea.
- Occupational ergonomic-related injuries are typically caused by the improper fit of the work area, equipment, and practices to the individual. Proper lighting, furniture and computer placement, and location of shelving and files are all important elements within the office area. Repetitive motion injuries may occur unless the work is properly fit to the individual. Injuries such as carpal tunnel syndrome may occur, which has symptoms of numb hands and fingers, wrist and finger pain, "pins and needles" sensations in fingers, reduced grasping strength and cold fingers.
- In addition to internal office walking and working surface areas, there are slip, trip and fall hazards associated with parking lots and walkways leading to the offices. Slips, trips and falls are extremely prevalent and costly, and are the second leading cause of workplace injuries in the United States. Human factors such as inattention, carrying objects, poor vision, bifocals and the use of over-the-counter medications contribute to slips and falls. Other contributing factors include slippery or uneven walking surfaces and trip hazards such as electrical cords. Environmental factors include ice and snow in parking lots and walkways, worn flooring or shoes with worn-down soles, or the presence of grease, oil or water on a floor. Falls at the same level or to a lower level can cause severe injuries and death.
- Combustible loading in officers consists of paper, computers and office furniture. Keep the work area free of unwarranted combustible materials such as cardboard boxes or trash. See the C-AD Housekeeping Policy. The personnel risks associated with the fire hazard are considered low. The fire protection of some buildings is improved by the installation of sprinkler systems, and all buildings have fire alarms. Emergency power and lighting are available in all buildings and the maximum travel distance from any point to an exit is less than 300 feet.
- Most office equipment is powered by standard 120 or 240 VAC power lines. These voltages are potentially lethal and appropriate care should be exercised around the equipment. Electronic equipment should be powered down and unplugged before opening or removing any covers. Liquids should be kept away from computers and electronics cabinets. Frayed or damaged cords should be replaced immediately.
- Kinetic energy hazards are associated with file drawers that can pull file cabinets over if the load is unbalanced, or slide out too quickly if the file cabinet is tilted away from the wall. Overexertion injuries can be caused by excessive lifting, pushing, pulling, holding, and carrying.
- Potential energy hazards are those associated with high shelves. Books or other items can fall if not properly secured or if the shelf is overloaded.

- Materials Safety Data Sheets must be used by personnel who work with hazardous chemicals. Typical office chemicals include cleaning agents and chemicals associated with copy or printing machines.
- BNL is an industrial facility and high power is available at many electric panels. In some buildings, the building lights are turned on and off at these panels. Electrical hazards at these panels that can lead to personnel injury include electrical shock and arc blast. Electric arcs can cause fatal skin burns, hearing loss, lung damage and eye damage. Electric shock can cause damage to nerve tissue and the circulatory system, plus stop the heart. Office workers MUST NOT operate circuit breakers at these panels unless properly trained and qualified.
- Natural hazards are those associated with animals and insects. Insect bites and stings, animal bites and traffic accidents as a result of animals in the roadway are possible causes of injury.

2) What consequences may result if your operations were to impact safety and health?

- Not following the OSH rules could injure myself and others, and incur regulatory penalties
- Injuries and illnesses can create loss of DOE, regulator and public trust

3) What benefits or positive effects would you notice with improved OSH performance?

- Prevention of injury/illness
- Safer, cleaner workplace
- Clear roles and responsibilities
- Improved relationship with DOE, regulators and the public

4) What role and responsibility do you have for these potential impacts and OSH performance?

My responsibilities are:

- To prevent work-related injuries, ill health and incidents
- To comply with C-AD and SMD occupational safety and health requirements
- Where appropriate, to provide input on safety and health to the Worker Occupational Safety and Health Committee, my supervisor and management
- To take action when controls fail
- To contact supervision if unsure of how to perform the work or if the procedures are unclear or incorrect
- To ensure that my required training is current

5) What specific controls at C-AD and SMD can be implemented to reduce the potential for work related injury/illness?

- All Hazards
    - Work Planning
    - Safety Inspections
    - Trained and Qualified Workers
    - Housekeeping

    - Proper Lighting in the Work Area
    - Compliance with OSHA Requirements
    - Communications
    - Procedures
- Hazardous or Toxic Materials
    - Ventilation
    - Compliance with MSDS
    - Labeling
    - Waste Controls
    - Use of Safe Substitutes
    - Use of Small Volumes
- Electrical Energy
    - Use of Surge Protectors
    - Use of Equipment that Meets UL or Equivalent Standards
    - Sufficient Numbers of Electrical Outlets
    - Not Plugging Power Strips Together
    - Not Plugging Power Strips Into Extension Cords
    - Use of Three Pronged Plug Appliances
- Kinetic Energy
    - Compliance with Traffic Rules and Traffic Control Signs
    - Use of Dollies and Hand Trucks to Eliminate Manual Material Handling Tasks
- Potential Energy
    - Smooth Non-Slippery Work Surfaces
    - Keeping Floors and Carpets in Good Repair
    - Cleaning Up Spills Quickly
    - Not Stretching Wires and Cords Across Walkways
    - Never Standing on a Chair
    - Not Storing or Retrieving Items Overhead
    - Keeping Waste and Recycling Containers Out of Walkways
- Work Environment
    - Workers Not Expected to Work More Than 16 Hours Straight
    - Take Breaks Every Few Hours
    - Allow at Least 8 Hours Between Work Periods
    - Ergonomic Reviews of Work Area
    - The body was meant to move about, not sit for long periods. Hourly standing breaks are recommended.
- Natural Hazards
    - Bug Spray
    - Housekeeping to Prevent Foraging by Animals and Insects
    - Awareness of the Possibility of Animals in Traffic Lanes

6) What C-AD and SMD procedures or programs reduce the potential for work related injury/illness?

- C-AD Housekeeping Policy
- C-AD Operations Procedure Manual

- C-AD Tier 1 Schedule
- C-AD Work Controls for C-A Staff
- Facility Specific Training
- Management Review
- OSH Management System
- OSH Objectives and Targets
- SMD Operations Procedure Manual
- SMD Tier 1 Schedule
- WOSH Committee

7) How would you respond in an emergency to reduce the potential for injury/illness and what actions could be taken to mitigate the event?

For C-AD

- See C-A OPM 3.0, Local Emergency Plan for the C-A Department
- See C-A OPM Chapter 10, Occurrence Reporting
- Dial 2222 or 911 (if calling from a cell phone, dial (631) 344-2222)
- Assemble at Emergency Assembly Points

For SMD

- See SMD OPM 3.0, Local Emergency Plan for the SMD
- Dial 2222 or 911 (if calling from a cell phone, dial (631) 344-2222)

8) What occupational safety and health techniques have been or could be considered to reduce or eliminate the potential risks associated with working in the accelerators?

The following preventive and protective measures in the following order of priority:

- Eliminate the hazard/risk (e.g., do not use a broken chair or do not use office equipment with frayed power cords)
- Control the hazard/risk at source, through the use of engineering controls (e.g., unplug office equipment before opening the cover)
- Minimize the hazard/risk through the use of safe work systems, such as ask the ESH Coordinator for help when you are unsure about a hazard or risk
- If residual hazards/risks cannot be controlled by the above measures, then use appropriate personal protective equipment, including clothing

9) Are there any key OSH-specific competency requirements for my position?

A job training assessment (JTA) is performed for every job category. Specific OSH training is listed in your training record. Specific OSH courses available to address hazards in accelerators are listed in Section 4 of Workplace Hazard and Risk Assessment for Offices.

10) What is the function of the C-AD/SMD Worker Occupational Safety and Health (WOSH) Committee?

The WOSH Committee was formed to ensure full worker participation in work-related OSH issues. This Committee meets at least once per quarter and consists of worker representatives from all of the C-AD/SMD Sections and Groups. Each meeting reviews the latest injury data, performance indicators, critiques and occurrences, and worker feedback. The Committee also assists in the review of programs, work practices, hazard identification, risk assessments and procedures as requested by the Associate chair for ESHQ. The WOSH Committee procedure, C-A-OPM 9.8.1, describes the WOSH Committee policy and requirements in detail.

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date: May 31, 2006
to: Course Participant
from: J. Maraviglia
subject: OSH Training for C-AD/SMD for Office Workers, Read & Acknowledgement

reference: Procedure: C-AD OPM 14.33.2

Please complete the information below indicating that you have read the reference document. Please return this completed form to ESH&Q Division, Ann Marie Luhrs, Bldg. 911A.

Thank you,
John Maraviglia

Name: _____ Life #: _____
Print

Name: _____ Date: _____
Signature

Please return this completed form to ESH&Q Division, Ann Marie Luhrs, Bldg. 911A.